CARD/COLUMN	VAR No	TITLE	CODES	MARGINALS
1/1-2	1	Q1) Raven's Progressive Matrix (Raven, 1965)	2 digit code Range 4-36	
1/3		Unused	Unused	
1/4-11	2-4	Q2) Culture Test (see note 1)		
1/4-5	2	Arts subscore	2 digit code Range 2-19	
1/6		Unused	Unused	
1/7-8	3	Science subscore	2 digit code Range 0-20	
1/9		Unused	Unused	
1/10-11	4	Total score	2 digit code Range 8-38	
1/12		Unused	Unused	
1/13-26	5-9	Q3) Watson-Glaser Critical Thinking Appraisal Test (1964)		
1/13-14	5	Sub-Test 1	2 digit code Range 0-18	

CARD/COLUMN	VAR No	TITLE	CODES	MARGINALS
1/15		Unused	Unused	
1/16-17	6	Sub-Test 2	2 digit code Range 1-23	
1/18		Unused	Unused	
1/19-20	7	Sub-Test 3	2 digit code Range 7-25	
1/21		Unused	Unused	
1/22-23	8	Sub-Test 4	2 digit code Range 3-24	
1/24		Unused	Unused	
1/25-26	9	Sub-Test 5	2 digit code Range 0-35	
1/27		Unused	Unused	
1/28-44	10-15	Q4) Allport, Vernon and Lindzey's Study of Values (Richardson S(1965) Study of Values Manual, NFER)		
1/28-29	1o	Sub-Test 1	2 digit code Range 11-50	
1/30		Unused	Unused	

CARD/COLUMN	VAR No	TITLE	CODES	MARGINALS
1/31-32	11	Sub-Test 2	2 digit code Range 13-49	
1/33		Unused	Unused	
1/34-35	12	Sub-Test 3	2 digit code Range 9-42	
1/36		Unused	Unused	
1/37-38	13	Sub-Test 4	2 digit code Range 22-56	
1/39		Unused	Unused	
1/40-41	14	Sub-Test 5	2 digit code Range 3-46	
1/42		Unused	Unused	
1/43-44	15	Sub-Test 6	2 digit code Range 4-55	
1/45...		Unused	Unused	
1/46-62	16-21	Q5) Personal details (see Note 2)		
1/46-47	16	Number of countries lived in outside Northern Ireland	2 digit code Range 0-7	

CARD/COLUMN	VAR No	TITLE	CODES	MARGINALS
1/48		Unused	Unused	
1/49-50	17	Number of countries visited outside Northern Ireland	2 digit code Range 0-13	
1/51		Unused	Unused	
1/52-53	18	Friendship choices - science	2 digit code Range 0-3	
1/54		Unused	Unused	
1/55-56	19	Friendship choices - arts	2 digit code Range 0-3	
1/57		Unused	Unused	
1/58-59	20	Friendship choices - others	2 digit code Range 0-3	
1/60		Unused	Unused	
1/61-62	21	Number of cultural interests (see note 3)	2 digit code Range 0-10	
1/63-74		Unused	Unused	
1/75-77		Case Number	3 digit code	278

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CARD/COLUMN	VAR No	TITLE	CODES	MARGINALS
1/78	22	Q6) Sex	1 Boy 2 Girl	153 125
1/79	23	School type	1 Single sex 2 Co-education	132 146
1/80	24	Specialism	1 Arts 2 Science	153 125

CARD/COLUMN	VAR No	TITLE	CODES	MARGINALS
1/1-14	1-5	Mechanical Accuracy Measure (Statham, 1976)		
1/1-2	1	Punctuation	2 digit code Range 0-16	
1/3		Unused	Unused	
1/4-5	2	Misspelling-phonetic	2 digit code Range 0-8	
1/6		Unused	Unused	
1/7-8	3	Misspelling-analogy	2 digit code Range 0-4	
1/9		Unused	Unused	
1/10-11	4	Misspelling-carelessness	2 digit code Range 0-11	
1/12		Unused	Unused	
1/13-14	5	Mechanical Accuracy Measure total score	2 digit code Range 0-18	
1/15		Unused	Unused	
1/16-18	6	English Picture vocabulary Test (Brimer & Dunn, 1968)	3 digit code Range 62-132	

CARD/COLUMN	VAR No	TITLE	CODES	MARGINALS
1/19		Unused	Unused	
1/20-21	7	Mill Hill Vocabulary Scale (Raven, 1958)	2 digit code Range 3-32	
1/22		Unused	Unused	
1/23-30	8-10	Richmond Culture Test (Richmond, 1963)		
1/23-24	8	Science scale	2 digit code Range 0-17	
1/25		Unused	Unused	
1/26-27	9	Arts scale	2 digit code Range 0-13	
1/28		Unused	Unused	
1/29-30	10	Total scale	2 digit code Range 1-28	
1/31		Unused	Unused	
1/32-43	11-14	AH2 Intelligence Test (Heim, Watts & Simmonds, 1974)		

CARD/COLUMN	VAR No	TITLE	CODES	MARGINALS
1/32-33	11	Verbal scale	2 digit code Range 15-37	
1/34		Unused	Unused	
1/35-36	12	Numerical scale	2 digit code Range 8-40	
1/37		Unused	Unused	
1/38-39	13	Perceptual scale	2 digit code Range 6-35	
1/40		Unused	Unused	
1/41-43	14	Total scale	3 digit code Range 36-109	
1/44		Unused	Unused	
1/45-55	15-18	Eysenck Personality Scale -Junior (Eysenck & Eysenck, 1975)		
1/45-46	15	Extraversion scale	2 digit code Range 5-24	
1/47		Unused	Unused	

CARD/COLUMN	VAR No	TITLE	CODES	MARGINALS
1/48-49	16	Neuroticism scale	2 digit code Range 2-20	
1/50		Unused	Unused	
1/51-52	17	Psychoticism scale	2 digit code Range 0-13	
1/53		Unused	Unused	
1/54-55	18	Socially desirable	2 digit code Range 0-16	
1/56		Unused	Unused	
1/57-58	19	A-level attainment (see note 1)	2 digit code Range 1-18	
1/59-60		Unused	Unused	
1/61	20	Sex of pupil	1 Boy 2 Girl	125 119
1/62	21	Specialism (see note 2)	1 Arts 2 Science	113 131
1/63	22	School type	1 Single sex 2 Co-education	160 64

CARD/COLUMN	VAR No	TITLE	CODES	MARGINALS
1/64-69		Unused	Unused	
1/70-72		Case Number	3 digit code	
1/73	23	Boy/Girl	B Boy G Girl	125 119
1/74-75	24	Grammar arts/Grammar science pupil	GA Grammar arts GS Grammar science	113 131
1/76	25	City/rural school	C City R Rural	131 113
1/77-80	26	Single sex/Mixed sex school	S SEX Single sex school M SEX Mixed sex school	84 160

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SAMPLE I CODING SHEET

	VARIABLE	SCORE RANGE	COLUMN
1.	Raven's Progressive Matrix (Raven, 1965)	4-36	1-2
2.	Culture Test (See Note 1)		
	Arts subscore	2-19	4-5
	Science subscore	0-20	7-8
	Total score	8-38	10-11
3.	Watson-Glaser Critical Thinking Appraisal Test (1964)		
	Sub-test 1	0-18	13-14
	" 2	1-23	16-17
	" 3	7-25	19-20
	" 4	3-24	22-23
	" 5	0-35	25-26
4.	Allport, Vernon and Lindzey's Study of Values (Richardson S (1965) Study of Values Manual, NFER)		
	Sub-test 1	11-50	28-29
	" 2	13-49	31-32
	" 3	9-42	34-35
	" 4	22-56	37-38
	" 5	3-46	40-41
	" 6	4-55	43-44
5.	Personal details (See Note 2)		
	No of countries lived in outside Northern Ireland	0-7	46-47
	" " " visited " " "	0-13	49-50
	Friendship choices - science	0-3	52-53
	" " - arts	0-3	55-56
	" " - others	0-3	58-59
	No of cultural interests (See Note 3)	0-10	61-62
6.	Case Number		75-77
	Sex (boy = 1; girl = 2)		78
	School type (single sex = 1; co-ed = 2)		79
	Specialism (arts = 1; science = 2) (See Note 4)		80

SAMPLE I Note 1

The Culture Test

Test 11

Anwer all the questions in this test.

Time allowed: 35 minutes.

The definitions in Questions 1 to 5 are of literary and/or artistic terms. These terms are amongst those lettered A to H. Match each definition to its term by selecting the appropriate letter.

A Decadence

B Classicism

C Existentialism

D Expressionism

E Impressionism

F New Wave

G Romanticism

H Surrealism

1. A literary and artistic revolution gathering impetus in the eighteenth century and at its height in the nineteenth century. Its most important elements were feeling for nature, emphasis on personal emotion and interest in the past and the exotic.

2. A major movement in nineteenth-century art in which the artists were absorbed by the play of light on the scene, trying to create the atmosphere rather than to present a factual report. Spontaneity was considered more important than calculation.

3. A term loosely applied to a group of film directors whose work was based on visual style and atmosphere rather than content, a free technical approach, and an admiration of the American thriller and western directors.

4. An artistic and literary movement in the twentieth century in which dream objects, fantastic images and automatic writing under hypnosis were used to break down the barriers between the conscious and unconscious.

5. A movement in the late nineteenth century characterised by a taste for the morbid and perverse, a belief in the superiority of the artificial over the natural, and an emphasis on the isolated role of the artist.

6. The ecological relationship between the members of four of the following pairs of organisms is different from that of the fifth pair. Which is the odd one out?

   A owl - mouse

   B rabbit - lettuce

   C dog - flea

   D cat - sparrow

   E thrush - snail

7. From the following sets of foodstuffs, choose the one consisting entirely of high protein foods:

   A cheese honey meat

   B eggs fish butter

   C fish eggs meat

   D meat cabbage fish

   E peas potatoes fish

Questions 8 to 12

Each of the separations 8 to 12 is by a particular means which depends on a fundamental difference in property between the materials to be separated.

For each separation select the appropriate property from the list labelled A to E and write down the corresponding letter. A given property may correspond to more than one method of separation or to none.

A boiling point

B density

C melting point

D particle size

E solubility

8. Cream from buttermilk in a centrifuge

9. Green leaf pigments by chromatography

10. Starch from the products of its digestion by dialysis

11. Crystalline salt from salt in saturated solution by filtration

12. Petrol from paraffin by fractional distillation

Questions 13 to 17

The following scientists named in questions 13 to 17 are associated with the development of particular scientific concepts. For each scientist select the appropriate concept from the list labelled A to E. A given concept may possibly correspond to more than one scientist or to none.

A air has "spring" (i.e. elasticity)

B an atom's mass is concentrated mainly in the nucleus

C blood circulates round the human body

D combustion in air involves combination with oxygen

E new species develop as a cumulative result of small changes in successive generations

13. Bohr

14. Boyle

15. Lamarck

16. Lavoisier

17. Rutherford

18. X is latitude 60°N., longitude 15°E., Y is latitude 30°N., longitude 30°W. Midday at X will be

A 3 hours later than midday at Y

B 2 hours later than midday at Y

C 1 hour later than midday at Y

D 1 hour earlier than midday at Y

E 3 hours earlier than midday at Y

By selecting the appropriate letter from A to K below show the composer, or architect, or designer of the following works:

19. Swan Lake

20. The S.S. Great Britain

21. The "Hallelujah" Chorus

22. The suite, Peer Gynt

23. The "Enigma" Variations

24. The House of Parliament

A Sir Charles Barry

B Grieg

C I.K. Brunel

D Elgar

E Handel

F Tchaikovsky

G Wagner

H Pugin

J Robert Stephenson

K Sibelius

Questions 22 - 26 contain summaries of films. Choose the title of each from the list overleaf lettered A to K.

25. Orson Welles starred in and directed this portrayal of the megalomania of a newspaper tycoon.

26. The Middle Ages in Sweden form the background to this film directed by Ingmar Bergman which raises issues of religious belief and the omnipresence of death.

27. A Hollywood "epic" of the American Civil War - one of the most commercially successful films of all time.

28. Elia Kazan directs Marlon Brando in this compelling study of union corruption in New York.

29. One of the most appealing of the post-war comedies from the British Ealing Studio featuring a fine performance by Alec Guinness.

A On the Waterfront

B Rebel Without a Cause

C The 400 Blows

D Citizen Kane

E The Seventh Seal

F If

G Last Year at Marienbad

H Rear Window

J Gone With the Wind

K The Lavender Hill Mob

30. What is the Doppler Effect?

A The splitting of a line spectrum under a strong magnetic field.

B The apparent change in the frequency of sound or electromagnetic radiation when the source moves relative to the observer.

C The production of opposite electrical charges on the opposite faces of a crystal subject to pressure.

D The generation or absorption of heat when an electric

current flows across the junctions between two different metals.

E The emission of radiation by an atom as the result of a change from an excited state to a lower energy state.

31. A good scientific experiment always

A produces commercially exploitable results

B adequately controls the variables

C confirms at least one previously stated hypothesis

D verifies something previously known

E uses a large random sample

32. The volume of a sphere is $\frac{4}{3}\overline{11}p^3$ where p is the radius. If the volume of a large sphere is 8 times the volume of a small sphere, it follows that the radious of the large sphere is

A 2 times the radius of the smaller sphere

B 4 times the radius of the smaller sphere

C 6 times the radius of the smaller sphere

D 8 times the radius of the smaller sphere

E 10 2/3 times the radius of the smaller sphere

Questions 33 to 37 contain brief quotations. From the titles listed in A to G below, choose the work from which the extract is taken.

33. "..... born, or at any rate, bred, in a handbag"

34. "I will never desert Mr Micawber."

35. "Corroborative detail to add verisimilitude to an otherwise bald and unconvincing narrative."

36. "Off with his head."

37. "Dear God! The very houses seem asleep."

A Lord of the Flies

B Alice in Wonderland

C Lines written upon Westminster Bridge

D David Copperfield

E Hamlet

F The Mikado

G The Importance of Being Earnest

In each of the following lists four of the five names have something in common. For each of Questions 38 to 41 select the letter corresponding to the outsider.

38. A propane B octane C butane D silane E methane

39. A dextrose B fructose C viscose D sucrose E glucose

40. A nimbus B stratus C cumulus D cirrus E pluvius

41. A adrenalin B amylase C trypsin D lipase E rennin

42. The force of attraction between two masses M_1 and M_2 separated by a distance d is $\frac{GM_1 M_2}{d^2}$ where G is the gravitational constant. Since Mars has twice the mass of Mercury and is four times as far from the Sun, it follows that the force of attraction between the Sun and Mars is

A $\frac{1}{32}$ of the force of attraction between the Sun and Mercury.

B ⅛ of the force of attraction between the Sun and Mercury.

C ¼ of the force of attraction between the Sun and Mercury.

D a half of the force of attraction between the Sun and Mercury.

E the same as the force of attraction between the Sun and Mercury.

SAMPLE I Note 2

The Questionnaire

Name .....

Age ..... years ..... months Male/Female

Subjects being studied at 'A' level .....

.....

Name the place in which you live (i.e. town, village or townland)

.....

Have you always live at this place? .....

If not, name all the places (i.e. town, village, townland) where you have lived .....

.....

List below all the countries you have visited outside N. Ireland

.....

.....

Imagine you have won a week's holiday in London for yourself and three school friends, pick the three friends you would ask to accompany you. Do not give their names, but list the 'A' level subjects they study at school

Friend A .....

Friend B .....

Friend C .....

In the space below give details of how you would spend the week in London:

SAMPLE I Note 3

(1) **Friendship Choices**

The analogy of the two cultures as different languages and the lack of communication between the arts and sciences has already been discussed at some length. This was an area in which some investigation was indicated. Through an examination of the subject specialization of three friends an attempt was made to assess the extent to which polarization between the arts and science specialists had already taken place by sixth form level. The friendship choice was classified as arts, science and other.

(2) **Cultural Interests**

Some indication of the hobbies and general interests of the subjects was needed but direct questioning may have led to a rather useless and not altogether truthful list from many pupils. Hence a way of assessing their interests indirectly was devised. They were asked to describe how they would spend their time during a holiday in London.

One mark was given for each separate activity. Care had to be taken that cultural interests were not double-marked. Sightseeing was included among these activities although in one or two cases the nature of the sights made it unreasonable to include this as a cultural activity.

Example

"I would go to a play, see Westminster Abbey, The Tate Gallery, the National Gallery and visit the Tower of London"

This counts as a score of 3.

A play = 1

The Tate Gallery and National Gallery = 1

The Tower of London and Westminster Abbey = 1

SAMPLE I Note 4

The sample had to consist of two clearly defined groups, the arts specialists and the science specialists. Fairly rigorous criteria were applied in the definition of each kind of specialist. The science specialist had to be studying at least two scientific subjects at A-level. Two were generally drawn from physics, chemistry, or biology. Mathematics and geography were both acceptable for the science specialists provided they were combined with other science subjects. The arts specialist had to be studying at least two literary subjects at A-level. Mathematics and geography were acceptable if one was included with two literary subjects. The combination mathematics and goegraphy was not accepted even taking into account a third A-level subject on either the arts or science side of the school curriculum. Such combinations were classified 'general' and excluded, non-academic subjects such as domestic-science were not accepted for either specialist group.

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SAMPLE II CODING SHEET

VARIABLE	SCORE RANGE	COLUMN
Mechanical Accuracy Measure (Statham, 1976)		
Punctuation	0-16	1-2
Misspelling - phonetic	0-8	4-5
- analogy	0-4	7-8
- carelessness	0-11	10-11
MAM total score	0-18	13-14
English Picture Vocab. Test (Brimer & Dunn, 1968)	62-132	16-17
Mill Hill Vocab. Scale (Raven, 1958)	3-32	19-21
Richmond Culture Test (Richmond, 1963)		
science scale	0-17	23-24
arts "	0-13	26-27
total "	1-28	29-30
AH2 Intelligence Test (Heim, Watts & Simmonds, 1974)		
verbal scale	15-37	32-33
numerical scale	8-40	35-36
perceptual scale	6-35	38-39
total scale	36-109	41-43
Eysenck Personality Scale - Junior (Eysenck & Eysenck, 1975)		
extraversion scale	5-24	45-46
neuroticism "	2-20	48-49
psychoticism "	0-13	51-52
soc. desirab. " (L-Scale)	0-16	54-55
A-level attainment (See Note 1)	1-18	57-58
Sex of pupil (Boy = 1; Girl = 2)		61
Specialism (See Note 2) (Arts = 1; Science = 2)		62
School type (single sex = 1; co-ed = 2)		63
Case No.		70-72
Boy/Girl (B = boy; G = girl)		73
Grammar Arts (GA)/Grammar Science (GS) pupil (GA/GS)		74-75
City/rural school (C = city; R = rural)		76
Single sex/Mixed sex school (S SEX/ M SEX)		77-80

SAMPLE II Note 1

A measure of A-level examination attainment was achieved by scoring each A-level subject in relation to the grade as indicated in Table 6.

Table 6 Scoring Scheme per Subject for A-level Attainment

A-level grade	A	B	C	D	E	O.L	F
Score	6	5	4	3	2	1	0

Each student was therefore assigned a total A-level score by summation of the individual subject scores (high scores corresponding to the higher examination grades). It was also decided to standardise the total score to 3 examination subjects. Hence the maximum score attainable was 18 (3 x 6). Students who sat more, or less than 3 subjects had each subject scored in accordance with Table 5, with the toal score calculated in proportion to 3 subjects.

SAMPLE II . Note 2

The sample consisted of 244 students who were studying for A-level examinations in June, 1978; 131 science specialists and 113 arts specialists. Science and arts specialists were restricted to those who were studying some combination of the subjects listed in Table 1.

Table 1. Subjects of science and arts specialists

Science specialists (1)	Arts specialists (2)
Chemistry	English Literature
Biology	History
Physics	Ancient History
Mathematics	French
Computer Science	German
	Spanish
	Latin
	Religious Education
	Greek

(Students of geography were not included in the sample in an attempt to keep the specialists as polar as possible.)

Thus science specialists were those who were studying some combination of the subjects listed in column (1) of Table 1, whilst arts specialists were studying some combination of the subjects listed in column (2) of Table 1. Students who were studying a hybrid group of subjects i.e. from columns (1) and (2) of Table 1 were omitted from the sample thereby attempting to achieve 'pure' science and arts specialists.